

PATENT DEPARTMENT
DIVISION

307

03500.014120.

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE 2004 AUG 23 PM 2:17



In re Application of:

AKIHIKO NAKAZAWA ET AL.

Application No.: 09/467,986

Filed: December 21, 1999

For: ENDLESS BELT FOR
ELECTROPHOTOGRAPHY,
PROCESS FOR PRODUCING
THE ENDLESS BELT, AND
IMAGE FORMING APPARATUS
HAVING THE ENDLESS BELT

Examiner: L. Ferguson

Group Art Unit: 1774

August 17, 2004

Commissioner for Patents
Post Office Box 1450
Alexandria, VA 22313-1450

REQUEST FOR REFUND

Sir:

In connection with the above-identified application, Applicant requests a refund of \$86.00 for claims in excess of three, which was erroneously charged to our Deposit Account 06-1205. It is requested that the refund be applied as a credit to that Deposit Account. The reason for the refund is explained below.

On June 22, 2004, Applicants submitted a Request for Continued Examination (RCE) and Supplemental Response (see attached copy of the RCE and Supplemental Response, and a postcard acknowledging receipt of the documents). No additional claims fees were due at that time because no new claims were added.

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Applicants' attorneys received a Monthly Statement of Deposit Account,
dated July 2004 (copy attached), indicating that Deposit Account No. 06-1205 was charged
\$86.00. Applicants respectfully submit that a refund of \$86.00 is due.

2004 AUG 23 PM 2:17

Accordingly, Applicants hereby request a refund and authorize the
Commissioner to credit Deposit Account No. 06-1205 in the amount of \$86.00, to resolve
this matter.

Applicants' undersigned attorney may be reached in our New York office by
telephone at (212) 218-2100. All correspondence should continue to be directed to our
New York office at the below listed address.

Respectfully submitted,


Jason M. Okun
Attorney for Applicants
Registration No. 48,512

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3801
Facsimile: (212) 218-2200

PATENT MAIL ROOM
DIVISION

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Commissioner for Patents

P.O. Box 1450
Alexandria, VA 22313-1450

Date 6 / 22 / 04
Mo. Day Yr.

Atty. Docket 03500.04120
09/467,986

Sir:

Kindly acknowledge receipt of the accompanying:

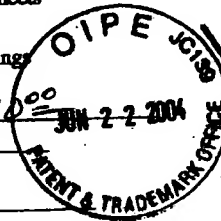
- ☐ Specifications, claims and abstract _____ pages, with Transmittal Form
- ☐ Patent Application Bibliographic Data Sheet _____ sheets
- ☐ Executed Oath or Declaration and Power of Attorney
- ☐ _____ Sheets of _____ formal _____ informal drawings
- ☐ Check for \$ _____ (filing fee)
- ☒ Request for Continued Examination and Check for \$ 770.00
- ☐ Assignment, PTO-1595 and Check for \$ _____
- ☐ Transmittal Under 37 CFR 1.53(d) (CPA)
- ☐ Petition under 37 CFR 1.136 and check for \$ _____

☒ Other (specify) Supplemental Response
by placing your receiving date stamp hereon and mailing or returning to deliverer.

This is a ☐ Continuation ☐ Divisional ☐ Continuation-In-Part

Atty. Jmo/nfr Due Date 6 / 22 / 04
Mo. Day Yr.

37 CFR 1.8 ☐
37 CFR 1.10 ☐
By Hand ☒



FC-S-A-00

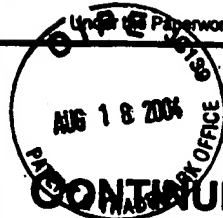
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PATENT MAINTENANCE DIVISION

PTO/SB/30 (08-00)

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REQUEST FOR CONTINUED EXAMINATION (RCE) TRANSMITTAL

Subsection (b) of 35 U.S.C. § 132, effective on May 29, 2000, provides for continued examination of an utility or plant application filed on or after June 8, 1995.

See The American Inventors Protection Act of 1999 (AIPA).

2004 AUG 23 PM 2:17

Application Number	09/487,988
Filing Date	December 21, 1999
First Named Inventor	AKHIKO NAKAZAMA ET AL.
Group Art Unit	1774
Examiner Name	L. Ferguson
Attorney Docket Number	03500.014120

This is a Request for Continued Examination (RCE) under 37 C.F.R. § 1.114 of the above-identified application.

NOTE: 37 C.F.R. § 1.114 is effective on May 29, 2000. If the above-identified application was filed prior to May 29, 2000, applicant may wish to consider filing a continued prosecution application (CPA) under 37 C.F.R. § 1.53(e) (PTO/SB/28) instead of a RCE to be eligible for the patent term adjustment provisions of the AIPA. See Changes to Application Examination and Provisional Application Practice, Final Rule, 65 Fed. Reg. 50092 (Aug. 16, 2000); Interim Rule, 65 Fed. Reg. 14865 (Mar. 20, 2000), 1233 Off. Gaz. Pat. Office 47 (Apr. 11, 2000), which established RCE practice.

1. Submission required under 37 C.F.R. § 1.114

- a. ☒ Previously submitted
- i. ☒ Consider the amendment(s)/reply under 37 C.F.R. § 1.116 previously filed on May 24, 2004
(Any unentered amendment(s) referred to above will be entered).
- ii. ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____
- iii. ☐ Other _____
- b. ☒ Enclosed
- i. ☒ Amendment/Reply
- ii. ☐ Affidavit(s)/Declaration(s)
- iii. ☐ Information Disclosure Statement (IDS)
- iv. ☐ Other _____

2. Miscellaneous

- a. ☐ Suspension of action on the above-identified application is requested under 37 C.F.R. § 1.103(c) for a period of _____ months. (Period of suspension shall not exceed 3 months; Fee under 37 C.F.R. § 1.17(i) required)
- b. ☐ Other _____

3. Fees

- The RCE fee under 37 C.F.R. § 1.17(e) is required by 37 C.F.R. § 1.114 when the RCE is filed.
- a. ☒ The Director is hereby authorized to charge any deficiencies in the following fees, or credit any overpayments, to Deposit Account No. 06-1205
- i. ☒ RCE fee required under 37 C.F.R. § 1.17(e)
- ii. ☒ Extension of time fee (37 C.F.R. §§ 1.136 and 1.17)
- iii. ☐ Other _____
- b. ☒ Check in the amount of \$ 770.00 is enclosed
- c. ☐ Payment by credit card (Form PTO-2002-1000) _____

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

Name (Print/Type)	Jason M. Smith	Registration No. (Attorney/Agent)	48,512
Signature		Date	June 21, 2004

CERTIFICATE OF MAILING OR TRANSMISSION

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, or facsimile transmitted to the U.S. Patent and Trademark Office on:

Name (Print/Type)	
Signature	
Date	

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03500.014120

PATENT APPLICATION

2004 AUG 23 PM 2:17

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Examiner: L. Ferguson

Group Art Unit: 1774

June 21, 2004

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

SUPPLEMENTAL RESPONSE

Sir:

A. Introductory Comments

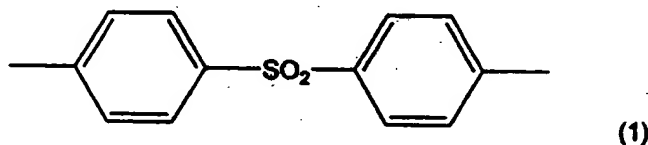
Prior to continuing prosecution of the above-identified application on the merits, please consider the following remarks.

B. Claims

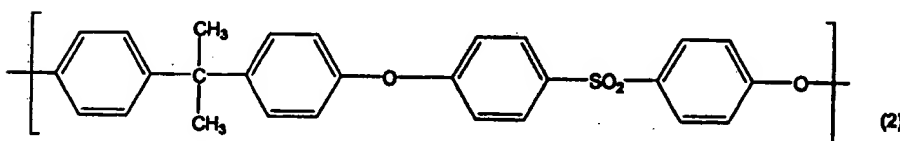
2004 AUG 23 PM 2:17

1. (Previously Presented) An endless belt for use in an electrophotographic apparatus, to which a toner image on a photosensitive member of the electrophotographic apparatus is transferred by applying a first transfer bias and from which the toner image is transferred to an image-receiving material by applying a second transfer bias, the belt having a single-layer structure, having a resistance of 1×10^0 to $1 \times 10^{14} \Omega$ and comprising a conductive agent and a thermoplastic resin,

wherein the thermoplastic resin has a diphenyl sulfone structure represented by the following Formula (1):



2. (Previously Presented) An endless belt according to claim 1, wherein said thermoplastic resin having a diphenyl sulfone structure is a thermoplastic resin having a structural unit represented by the following Formula (2):



3. (Original) An endless belt according to claim 1, which has a thickness of from 40 μm to 300 μm .

2004 AUG 23 PM 2: 17

4-9. (Cancelled)

10. (Previously Presented) An endless belt according to claim 1, which has a maximum value of a surface-direction resistance that is not greater than 100 times a minimum value of said surface-direction resistance.

11. (Previously Presented) An endless belt according to claim 1, which has a maximum value of a thickness-direction resistance that is not greater than 100 times a minimum value of said thickness-direction resistance.

12. (Original) An endless belt according to claim 1, which is an intermediate transfer belt.

13. (Original) An endless belt according to claim 1, which is a transfer material carrying belt.

14-29. (Cancelled)

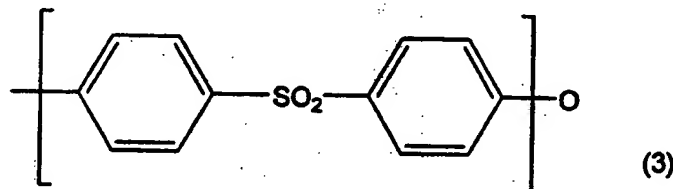
30. (Previously Presented) An image forming apparatus for electrophotography comprising:

2004 AUG 23 PM 2:17

a photosensitive member;
an endless belt according to claim 1; and
means for transferring a toner image formed on the photosensitive member
to the endless belt under an application of a first transfer bias; and
means for transferring the toner image from the endless belt to an image-
receiving material under an application of a second transfer bias.

31-34. (Cancelled)

35. (Previously Presented) An endless belt according to claim 1, wherein
said thermoplastic resin having a diphenyl sulfone structure is a thermoplastic resin having
a structural unit represented by the following Formula (3):



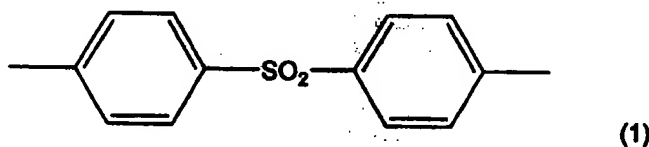
C. Remarks

2004 AUG 23 PM 2:17

The claims are 1-3, 10-13, 30 and 35, with claim 1 being the sole independent claim. Reconsideration of the present claims is expressly requested.

Claims 1-3, 10-13 and 30 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over U.S. Patent No. 5,525,446 (Sypula). The grounds of rejection are respectfully traversed.

The Examiner has alleged in the Advisory Action that Sypula teaches the conventionality of single layer intermediate transfer belts in column 1, lines 57-63. Applicants note that they do not claim to have invented the first single-layer belt. One of the key features of the present invention is that a single-layer belt has a conductive agent and a thermoplastic resin represented by Formula (1):



Applicants respectfully submit that even though Sypula discloses some single layer belts in column 1, lines 57-63, this disclosure cannot be used to modify the belt in Sypula to render the presently claimed invention unpatentable.¹

In its background section, Sypula discloses that there are known single layer belts. However, according to Sypula, such belts do not have desirable mechanical strength and electrical properties for transferring a full color image with high color fidelity. To

^{1/} Applicants note that none of prior art belts disclosed in the background section of Sypula have a resin with a diphenyl sulfone structure as presently claimed.

2004 AUG 23 PM 2:17

solve this problem, Sypula discloses a belt comprising a film base layer and a top thermoplastic film forming polymer layer, which are bonded together by an adhesive, i.e., a multi-layer structure.

Sypula states that "[t]he top layer has the proper electrical properties for charge dissipation which is necessary for toner image transfer." (Col. 2, lines 43-44). Thus, removing the top layer would deprive the belt of a function Sypula considers necessary.

In fact, as mentioned above, Sypula's goal is to overcome insufficient electrical properties of the prior art belts. Therefore, Sypula teaches away from the modification proposed by the Examiner, because such a modification would create the very problem Sypula attempts to solve. Sypula does not disclose or suggest that the proper electrical properties of the top layer are compensated for by the base layer. Consequently, if the top layer is removed and the remaining base layer in Sypula is not taught as being capable of functioning as a toner transfer member in an electrophotographic apparatus, Sypula cannot render the presently claimed invention unpatentable.

As stated in M.P.E.P. 2111.04(II)(B), "omission of an element and retention of its function is an indicia of non-obviousness" (emphasis added). Thus, even if the base layer in Sypula could function as a transfer member without the top layer, a previously undisclosed retention of its necessary functionality prevents Sypula from rendering the presently claimed invention obvious. See In re Edge, 149 U.S.P.Q. (BNA) 556 (C.C.P.A. 1966).


The Examiner's reliance on Applicants' disclosure regarding the fact that the belt can have one or more layers is impermissible hindsight reasoning, which cannot be

used to show a suggestion or motivation to modify Sypula. Examiner's reliance on prior art single-layer belts mentioned in Sypula cannot serve as motivation or suggestion for modifying Sypula, because Sypula effectively teaches away from single-layer structures of these prior art documents. Accordingly, it is clear that Sypula cannot affect the patentability of the presently claimed invention.

Wherefore, Applicants respectfully submit that the presently claimed invention is patentable over Sypula and request that the outstanding rejection be withdrawn and the present case be passed to issue.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address given below.

Respectfully submitted,



Attorney for Applicants
Registration No. 48,512

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
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